Notice of Allowability	Application No.	Applicant(s)	
	09/342,801	JOHNSON, KLEIN L.	
	Examiner	Art Unit	
	Michael P. Mooney	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *5/9/05 Amdt.*.

2. ☒ The allowed claim(s) is/are *1-3,5,7-11,33-35,48-62,64,65 and 69-80*.

3. ☒ The drawings filed on *12 May 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 1/13/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

The cancellation of claims 18-23, 28-32, and 36 in the Remarks filed 5/9/05 is acknowledged. Furthermore, consistent with their dependence on cancelled claim 36, claims 37-47 are cancelled.

Linking claims 1, 33 are allowed. Since the restriction requirement among inventions as set forth in the Office action mailed on 12/22/03, was conditioned on the nonallowance of the linking claim(s), **the restriction requirement as to the linked inventions is hereby withdrawn**. Claims 8-11, 50-54 previously withdrawn from consideration as a result of the restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement as to the linked inventions, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art, either alone or in combination, does not disclose or render obvious a first housing having a body with an outer surface and an inner surface and extending around said chip and fixed relative to said window, said first housing having one or more

electrical terminals along its outer surface that are electrically connected through the body via an embedded trace in the housing to at least one electrical terminal along the inner surface of the housing; and at least one terminal of said chip being bump bonded to a first conductive trace on said window, and at least one said electrical terminal along the inner surface of the housing being bump bonded to said first conductive trace on said window in combination with the rest of claim 1 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 1 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a semiconductor chip fixed relative to said window having at least one terminal connected to the at least one conductive trace; a first housing surrounding said chip and affixed to said window; and a conductive path embedded in said housing from the at least one conductive trace to an at least one pad on an external surface of said housing in combination with the rest of claim 33 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 33 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious said first housing having at least one electrical terminal along its outer surface, which is electrically connected by an embedded electrical path through the body of the first housing to at least one electrical terminal along the inner surface of the first housing;

said window includes one or more conductive traces; said chip includes one or more electrical terminals; and at least one terminal of said chip is bump bonded to a conductive trace on said window, and at least one terminal along the inner surface of the first housing is bump bonded to a conductive trace on said window in combination with the rest of claim 62 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 62 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a first housing having a body, an electrically conductive internal pad, an electrical path connected to said internal pad and embedded in said body, and an electrically conductive external pad connected to said electrical path; and a window attached relative to said first housing, wherein the internal pad of the housing faces said window; at least one conductive trace formed on said window; and wherein the at least one conductive trace is electrically connected to the pad of said chip and to the internal pad of said first housing in combination with the rest of claim 69 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 69 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious said integrated circuit has at least one photonic device; and said first housing and said window form a hermetically sealed enclosure around said integrated circuit, said

housing having a body with at least one conductor extending on an embedded path from an inner surface of the housing at the hermetically sealed enclosure to an outer surface of the housing, the at least one conductor having a low resistance path to a terminal of the integrated circuit in combination with the rest of claim 74 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 74 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a housing having a body with an outer surface and an inner surface, the inner surface extending around said chip and fixed relative to said window to form a chip cavity; and said housing being monolithic and having at least one electrical terminal along its outer surface, which is electrically connected through the body via an embedded trace in the housing to at least one electrical terminal along the inner surface of the housing in combination with the rest of claim 78 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 78 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a housing having a body with an outer surface and an inner surface, the inner surface extending around at least part of said chip and fixed relative to said window to form a hermetically sealed chip cavity; said housing having at least one electrical terminal along its outer surface, which is electrically connected through an embedded path in the

body of the housing to at least one electrical terminal along the inner surface of the housing in combination with the rest of claim 80 for the reasons stated by Applicant in the Remarks section filed 5/9/05 .

It is noted that the claim 80 is allowable because the unique combination of each and every specific element stated in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

Michael P. Mooney
Examiner
Art Unit 2883

Frank G. Font
Supervisory Patent Examiner
Art Unit 2883

FGF/mpm
8/18/05